

Remarks

This amendment is submitted in response to the Official action mailed October 26, 2005.

Review and reconsideration of this application are respectfully requested in view of the above amendment and the following remarks.

Election/Restriction

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-11, drawn to a composition, classified in class 524, subclass 564.
- II. Claims 12-35, drawn to an automotive component, classified in class 428, subclass 42k8/36.9.

Claims 26-36 are drawn to a method of using the composition. Such claims have been combined with the article claims (12-25 and 36-38).

Response to the Election/Restriction

In accordance with the examiner's requirement as set forth at page 3, paragraph 4 of the Official action, applicant affirms the election of Group I, claims 1-11 to be examined.

Objection to the Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. The examiner states that throughout the specification an inconsistent description of the relative amounts of ingredients is observed. For example, the examiner points to page 8 where none of the percentages corresponding to the amounts of the ingredient indicate the basis, but then on page 9, most of the ingredients are indicated in "% by weight."
2. The examiner states that both the copolymer containing two vinyl esters and the

copolymer containing vinyl acetate and ethylene are incompletely described since no basis is given for the relative amounts of comonomer.

Response to the Objection to the Specification

1. In accordance with the examiner's objection, applicant has reviewed the entire specification and has made the necessary amendments to add "% by weight" to provide a proper basis for the percentage amounts. No new matter has been introduced into the specification.
2. Applicant has amended the specification at all appropriate locations to define the amounts of the comonomers to be present in "weight %" which is customary in such cases. Accordingly, it is believed that this objection can now be withdrawn.

Claim Objections

Claims 4, 9, 10, and 11 are objected to for the following informalities:

1. With respect to claim 4, "said elastomer composition" lacks antecedent basis and should read as "the elastomeric composition" as recited in line 1 of claim 1.
2. With respect to claim 9, the word "copolymer" should be inserted after "ethylene-vinyl acetate" in line 3 of the claim to indicate that it is a polymer.
3. With respect to claims 10 and 11, the term "by weight" should be inserted before the ingredients "1-octanedecanamine" and "organic phosphate ester". Moreover, the word "and" should be inserted before the last component to complete the claim language.

Response to the claim rejection

1. With respect to claim 4, applicant has amended claim 4 to replace "said elastomer composition" with "said elastomeric copolymer composition."
2. With respect to claim 9, applicant has amended claim 9 to add the term "copolymer" after "ethylene-vinyl acetate" to indicate that it is a copolymer.

3. With respect to claims 10 and 11, applicant has amended claims 10 and 11 to insert the term "by weight" before the ingredients "1-octanedecanamine" and "organic phosphate ester." Furthermore, the term "and" has been added before the last component in both claims.

Claim Rejections - 35 U.S.C. § 112

Claims 5, 7, 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. With respect to claims 5, 10, and 11, the relative amount of vinyl acetate and vinyl laurate in the copolymer lacks basis, i.e., is it based on weight % or mole %? There is no support in the specification for this basis.

2. With respect to claims 7 and 11, the relative amounts of vinyl acetate and ethylene in the copolymer lacks basis, i.e., is it based on weight % or mole %? There is no support in the specification for this basis.

3. With respect to claim 8, the amount of additives lacks basis, i.e., is it based on weight % or volume %? There is no support in the specification for this basis.

Response to the Claim Rejections - 35 U.S.C. § 112

1. With respect to claims 5, 7, 10, and 11, applicant submits that it is customary to define such components in a copolymer as being present in the copolymer as weight %. In support of this custom, applicant directs the examiner's attention to U.S. Patents 6,464,607 (Rosenblom) and 5,173,317 (Hartman) and Pat. Pub. No. US 2002/0042464 A1(Barclay), all of which were cited in the present application. In any event, claim 33 specifically defines the vinyl acetate-vinyl laurate copolymer as containing about 50 to 80% by weight of a vinyl acetate and about 50 to 20% by weight vinyl laurate.

2. With respect to claims 7 and 11, applicant submits that since the vinyl acetate and the vinyl laurate components in the vinyl acetate-vinyl laurate copolymer is defined in claim 33 as

being present in weight %, the ethylene and vinyl acetate components of the ethylene-vinyl acetate copolymer are also present in weight %, particularly, since it is customary to defines such components in a copolymer in weight %.

3. With respect to claim 8, applicant that the additives are defined as being present in the composition precursor in weight % (see page 9 which includes the additives as being present in the composition precursor as weight %. The weight % of the additives is also supported in claims 9, 10, 1120, 21, 22, 3233, 34, 35 and 36.

In view of the above amendments and remarks, it is believed that the rejection under 35 U.S.C. 112 can be withdrawn.

Claim Rejections - 35 U.S.C. § 102

1. Claims 1-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hartman et al (US. 5,173,317). The examiner alleges that Hartman et al discloses a chewing gum composition comprising a 10-45 wt % vinyl laurate/vinyl acetate copolymer containing 10-45 wt % of vinyl laurate (col. 2, lines 23-47), polyisobutylene (col. 2, lines 48-50); and other additives such as plasticizers (col. 2, line 57 to col. 3, line 6) and fillers, texturizers, colorants, and antioxidants (col. 4, lines 5-38). The examiner points to Table I in col. 4 to exemplify amounts of ingredients. The examiner concludes that, in light of the above, it is clear that Hartman et al anticipates the presently cited claims.

2. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by D'Amelia et al (US 4,968,511). The examiner alleges that D'Amelia et al discloses a chewing gum composition comprising 1.5-25 wt% pf certain vinyl polymers containing copolymers of vinyl alkyl esters (col. 4, line 30 to col. 5, line 28), copolymers of ethylene and vinyl alkyl esters (col. 5, line 30 to col. 6, line 36), and mixtures thereof (col. 7, lines 52-53); and up to 20 wt% fillers and plasticizers (see examples, e.g., Table 1). The examiner concludes that, in light of the above, it is clear that D'Amelia et al anticipates the presently cited claims.

3. Claims 1, 2, 6, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Konno et al (US 2001/0006999). The examiner alleges that Konno et al discloses a rubber composition suitable for a fuel system hose comprising 5-50wt% of a vinyl chloride resin

copolymerizable with at least one monomer such as vinyl acetate and vinyl laurate (paragraphs 0019-0020); 90-55 wt% of an acrylonitrile-butadiene rubber (0011); and additives (0029-032). The examiner concludes that, in light of the above, it is clear that Konno et al anticipates the presently cited claims.

Response to the Claimed Rejections - 35 U.S.C. § 102

1. With respect to the rejection of claims 1-6 and 8 under 35 U.S.C. 102(b) as being anticipated by Hartman et al, applicant has amended claim 1 to define the composition of the present invention as being an automotive component composition. The composition is further defined in the claim as exhibiting improved heat resistance, pressure resistance, and fluid impermeability. The composition comprises an elastomeric copolymer containing two or more vinyl esters wherein the two or more vinyl esters are different from each other.

Hartman et al, on the other hand, specifically teach a gum base composition for chewing gum. It is believed that a person involved in the automotive industry, particularly in the manufacture of automotive hoses, belts, etc would not be led to the present invention by the teachings of the patent to Hartman et al which teach a formulation for chewing gum.

The requirement for anticipation under 35 U.S.C. 102(b) specifies that "the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." Obviously, claims directed to an automotive component composition is not patented or described in the patent to Hartman which teaches a chewing gum composition. The examiner cites case law which holds that "where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation." *Rowe v. Dror*, 112 F.3d 473, 478, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997). In view of the amendment to base claim 1, applicant submits that the invention is now defined as "an automotive component composition" which is considered to be a limitation of the claimed composition and not simply a stated purpose or intended use for the composition. Accordingly, applicant respectfully requests that the rejection of claims 1-8 under 35 U.S.C. 102(b) over the patent to Hartman et al be withdrawn.

2. With respect to the rejection of claims 1-8 under 35 U.S.C. 102(b) as being anticipated by D'Amelia et al, applicant has amended claim 1 to define the composition of the present invention as being an automotive component composition. The composition is further defined in the claim as exhibiting improved heat resistance, pressure resistance, and fluid impermeability. The composition comprises an elastomeric copolymer containing two or more vinyl esters wherein the two or more vinyl esters are different from each other.

D'Amelia et al, specifically teach the preparation of a commercially useful chewing product. As argued in the above 102(b) rejection of claims 1-6, and 8 over the patent to Hartman et al, it is believed that a person involved in the automotive industry, particularly in the manufacture of automotive hoses, belts, etc would not be led to the present invention by the teachings of the patent to D'Amelia et al which teach a formulation for chewing gum.

As stated above, the requirements for anticipation under 35 U.S.C. 102(b) "the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." Obviously, a patent disclosing a chewing gum composition does not anticipate the present invention which is directed to an automotive component composition. The examiner cites case law which holds that "where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation." *Rowe v. Dror*, 112 F.3d 473,478,42,USPQ2d 1550, 1553 (Fed. Cir. 1997). In view of the amendment to base claim 1 wherein the present invention is now defined as "an automotive component composition", it is respectfully requested that this rejection, of claims 1-8 under 35 U.S.C. 102(b) over the patent to D'Amelia et al, as well as the above 102(b) rejection of claims 1-6 and 8 over Hartman et al, be withdrawn.

3. With respect to the rejection of claims 1, 2, 6, 8, and 9 under 35 U.S.C. 102(b) as being anticipated by Konno et al, applicant submits that Konno et al teaches a rubber composition and fuel system hose which comprises a nitrile rubber specified as having a bound unsaturated nitrile content of 43-60% by weight and a polymer Mooney viscosity (ML₁₊₄, 100° C) of 95-140 and a vinyl chloride resin. The vinyl chloride resin may be vinyl chloride homopolymer (poly(vinyl chloride)) or copolymer resins of vinyl chloride and a monomer copolymerizable therewith. The copolymerizable monomer may be vinyl esters such as vinyl acetate, vinyl

propionate or vinyl laurate. In any case the composition is not a vinyl acetate-vinyl laurate copolymer nor does it contain a vinyl acetate-vinyl laurate copolymer. The composition of Konno et al specifies a comonomer, which can be either vinyl acetate or vinyl laurate, but not a copolymer of both vinyl acetate and vinyl laurate, copolymerized with the vinyl chloride, the vinyl chloride being required. According to Konno et al, the content of the copolymerizable monomer in the copolymer is not more than 15% by weight, preferably not more than 10% by weight, and more preferably not more than 5% by weight. When the content is higher than the above mentioned range, the hose obtained by using the copolymer may possibly be poor in resistance to ozone, resistance to fuel permeation and resistance to low temperature. According to Konno et al, preferred among the vinyl chloride resins used in his invention is poly(vinyl chloride), i.e., no copolymerizable monomer present. In view of the above remarks and since the identical invention must be shown in as complete detail as in the ... claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed.Cir. 1989)al reference. It is obvious that the present claims are not anticipated by Konno et al. Accordingly, it is respectfully requested that this rejection of claims 1, 2, 6, 8, and 9 under 35 U.S.C. 102(b) over the reference to Konno et al be withdrawn.

Claim Rejections - 35 U.S.C. § 103

1. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpaentable over Rosenbloom et al (US 6,464,607) in view of D'Amelia et al (US 4,968,511). The examiner alleges that Rosenbloom et al discloses a composition used in a power transmission belt comprising 0-50 parts by weight (pbw) of an elastomer such as ethylene-vinyl acetate copolymer (col. 3, lines 23-37); 0.5-3 phr fatty acids such as stearic acid; 5-250 phr of carbon black (col. 3, lines 58-67); 0-80 phr silica (col. 4, lines 29-49); 1-100 phr plasticizer; 1-12 phr organic peroxides (col. 5, lines 3-20); 1-30 phr of coagents such as triallyl cyanuratel, triallyl phosphatel, and n,n'-m-phenylene-dimaleimide (col. 5, lines 2-31); 1-5 phr antioxidant such as trimethyl-dihydroquinoline. The examiner states that Rosenbloom et al does not teach the use of a copolymer containing a first vinyl ester and a second vinyl ester like presently claimed; however, the examiner alleges that Rosenbloom et al is open to the use of any suitable reinforcing rubber, including ethylene-vinyl acetate copolymer (col. 3, lines 22-37).

D'Amelia et al is cited as disclosing an elastomeric composition and teaches that any one of or a combination of (col.7, lines 52-23) copolymers of two vinyl alkyl esters (e.g., vinyl acetate/vinyl laurate copolymer) (col. 4, line 30 to col. 5, line 2) and copolymers of ethylene and

one vinyl alkyl ester (e.g. ethylene/vinyl acetate copolymer (col. 5, line 30 to col. 6, line 36) may be used with no exception or variation in the final product. Thus, it is the examiner's position that a copolymer of two vinyl alkyl esters and copolymer of ethylene and one vinyl alkyl ester are equivalent and interchangeable as taught by D'Amelia et al. The examiner states that case law holds that the mere substitution of an equivalent (something equal in value or meaning, as taught by analogous prior art is not an act of invention; where equivalency is known to the prior art, the substitution of one equivalent for another is not patentable. (*In re Ruff* 118 USPQ 343 (CCPA 1958). The examiner concludes that, given that Rosenbloom et al is open to the use of a suitable rubber and given that a copolymer of two vinyl esters and a copolymer of ethylene and a vinyl ester are equivalent and interchangeable as taught by D'Amelia et al, it would have been obvious to one of ordinary skill in the art to utilize a copolymer of two vinyl alkyl esters (in particular, vinyl acetate/vinyl laurate) or a combination of the two copolymers in the composition of Rosenbloom et al and thereby arrive at the presently cited claims. The examiner suggests that while D'Amelia et al is drawn to a chewing gum formulation, the fact remains that it is relevant and applicant.

2. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenbloom et al (US 6,464,607) in view of D'Amelia et al (US 4,968,511) and further in view of Williams (US 5,492,971) and Barclay et al (US 2002/0042484).

With respect to the references to Rosenbloom et al and D'Amelia et al, the examiner refers to the above discussion.

Rosenbloom et al does not disclose the use of trioctyl trimellitates as a plasticizer of 1-octanedecanamine as a processing agent among its conventional additives, nevertheless, Rosenbloom et al is open to the use of any conventional additive (col. 4, lines 19-28).

Williams is cited as disclosing elastomeric compositions and describes a variety of conventional additives in elastomer compounding, including a processing aid such as octadecylamine (col. 4, lines 20-34).

Barclay et al is cited as disclosing a cured elastomer composition and teaches plasticizers such as trioctyl trimellitates commonly used in elastomeric systems (0019).

The examiner concludes that, given that Rosenbloom et al is open to the use of any conventional additives, it would have been obvious to one of ordinary skill in the art to utilize a commonly known processing aid such as octadecylamine as taught by Williams and a plasticizer such as tricetyl trimellitate as taught by Barclay et al in the composition of Rosenbloom et al in suitable amounts and thereby arrive at the presently cited claims.

Response to the claim rejections - 35 U.S.C. § 103

1. With respect to the rejection of claims 1-9 under 35 U.S.C. 103(a) over Rosenbloom et al in view of D'Amelia et al, applicant submits that the vinyl acetate-vinyl laurate copolymer component (which is absent from the Rosenbloom et al patent) is the major ingredient of the present automotive component composition and indeed forms the matrix in which the various other components are incorporated. Therefore, the vinyl acetate-vinyl laurate copolymer is a most critical ingredient, and may be the most critical ingredient, of the present invention. While Rosenbloom teaches a power transmission belt formed from an elastomeric composition comprising about 50 to 100 parts by weight of an ethylene-alpha olefin elastomer such as ethylene-propylene-diene monomer (EPDM) and about 0 to 50 parts by weight of a rubber which is preferably an ethylene-vinyl acetate copolymer, there is no mention of a copolymer containing a first vinyl ester and a second vinyl ester, and certainly no mention of vinyl acetate-vinyl laurate copolymer. The examiner cites the patent to D'Amelia et al as disclosing an elastomeric composition and teaches that any one of or a combination of copolymers of two vinyl alkyl esters (e.g., vinyl acetate/vinyl laurate copolymers and copolymers of ethylene and one vinyl alkyl ester (e.g., ethylene/vinyl acetate copolymer) may be used with no expectation of variation in the final product. According to the examiner the mere substitution of an equivalent as taught by analogous prior art is not an act of invention; where equivalency is known to the prior art, the substitution of one equivalent for another is not patentable. The examiner concludes that, given that Rosenbloom et al is open to the use of a suitable rubber and given that a copolymer of two vinyl esters and a copolymer of ethylene and a vinyl ester are equivalent and interchangeable as taught by D'Amelia et al, it would have been obvious to one of ordinary skill in the art to utilize a copolymer of two vinyl alkyl esters (in particular, vinyl acetate/vinyl laurate) or a combination of the two copolymers in the composition of Rosenbloom et al and thereby arrive at the presently cited claims. Applicant contends that the key words to the examiner's holding are "analogous prior art". The examiner suggests that while D'Amelia et al is drawn to a chewing gum formulation, the fact remains that it is relevant and applicable. In view of the amendment to claim 1 where the composition is now defined as "an automotive component composition", applicant submits that the combination of Rosenbloom et al in view of D'Amelia et al is not proper since, as mentioned above, Rosenbloom et al disclose a power steering belt formed from an elastomeric composition comprising an ethylene-alpha olefin elastomer such as ethylene-propylene-diene monomer (EPDM) which may or may not contain a rubber which may or may not be an ethylene-vinyl acetate copolymer, there is no mention of a copolymer containing a first

v vinyl ester and a second vinyl ester, and certainly no mention of vinyl acetate-vinyl laurate copolymer in the patent to Rosenbloom et al. The patent to D'Amelia et al, which is directed to chewing gum, a totally nonanalogous art and material with respect to either the Rosenbloom et al patent or the present invention, teaches the presence of a copolymer of vinyl acetate and vinyl laurate in their chewing gum composition. Applicant believes that the obviousness rejection must fail because there is no suggestion or motivation in the prior art cited for combining the references, "A determination of obviousness must involve more than indiscriminately combining prior art; a motivation or suggestion to combine must exist." *Micro Chemical, Inc. v. Great Plains Chemical Co.*, 41 USPQ 2d 1238, 1244 (Fed. Cir. 1997). Furthermore, the teaching or suggestion must be found in the prior art, not in the applicant's disclosure, *In re Vaeck*, 947 F. 2D 488, 20 USPQ 2d 1438 (Fed. Cir. 1991). Accordingly, it is believed that the combination of Rosenbloom et al and D'Amelia et al is improper and that the rejection of claims 1-9 under 35 U.S.C. 103(a) as being obvious over Rosenbloom et al in view of D'Amelia et al can now be withdrawn. Therefore, in view of the above remarks, it is respectfully requested that this rejection be withdrawn.

2. With respect to the rejection of claims 10 and 11 under 35 U.S.C. 103(a) over Rosenbloom et al in view of D'Amelia et al and further in view of Williams and Barclay et al, applicant submits that claims 10 and 11 are simply further limitations of the base claim and that, if an independent claim is nonobvious under 35 U.S.C. 103(a), then any claims depending therefrom is nonobvious.

In view of the forgoing amendments and remarks, it is believed that this application is now in condition for allowance and an early indication thereof is earnestly solicited.

Respectfully submitted,



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